<u>REMARKS</u>

The Examiner rejects Claims 7, 10-13, 21, 24-27, 37, and 43-46 under 35 U.S.C.§112, second paragraph, as being indefinite. Claims 24 and 45-46 have been canceled. Claims 7, 10, 11, 21, 25, and 44 have been amended to overcome the rejection. Regarding the rejection of Claims 37, 43-44, and 46, the term "affordances" refers to user manipulable graphical elements that can be repositioned by the user to alter selected parameters, such as parameters in a mathematical equation characterizing a linear or sinusoidal waveform.

The Examiner rejects Claims 1-2, 4-5, 8-9, 15-16, 18-19, 21-23, 29, and 35-46 under 35 U.S.C.§102(e) as being anticipated by U.S. Patent Application 2002/0191023 to Chandhoke et al. and Claims 3, 6-7, 17, and 20 under 35 U.S.C.§103(a) as being unpatentable over Chandhoke et al. and further in view of U.S. Patent 6,222,540 to Sacerdoti.

The Examiner has not rejected substantively dependent Claims 10-13 and 24-26. The claims are rejected only under 35 U.S.C.§112, second paragraph. Accordingly, Applicant believes that these dependent claims would be allowable if amended to overcome the formal rejection under Section 112. With this in mind, independent Claim 1 has been amended to include the limitations of dependent Claim 10, and independent Claim 15 to include the limitations of dependent Claim 24. New independent Claim 47 has been added, which is a combination of independent Claim 15 and dependent Claim 25.

Applicant respectfully traverses the Examiner's rejections. Chandhoke et al. and Sacerdoti fail to teach or suggest, individually or collectively, at least the italicized features of independent Claims 1, 15, 39, and 44 as set forth below:

1.   An apparatus comprising:
a display device, and
a display controller operable to display a first graphical image of tabular data, *accept a user selected range of values for editing of the first graphical image, wherein the range of values are included within the first graphical image, accept a user selected editing function from among a plurality of possible editing functions, and alter the first graphical image to produce a second graphical image, wherein the second graphical image comprises at least one unaltered portion of the first graphical image outside of the selected range and an altered portion of the first graphical image within the selected range, the altered portion being derived from the editing function, wherein the display controller is configured to display the editing function as an editing option referencing a mathematical equation and permit a user to edit the tabular data by selecting the displayed editing function to be applied to the data display element.*

15.   A method of interactively displaying tabular data comprising the steps of:
(A)   displaying a first graphical image representative of tabular data;
(B)   *accepting a user selected range of values for editing of the first graphical image, wherein the range of values are included within the first graphical image;*
(C)   *accepting a user selected editing function from among a plurality of possible editing functions;*
(D)   *altering the first graphical image to produce a second graphical image, wherein the second graphical image comprises at least an unaltered portion of the first graphical image and an altered portion of the first graphical image derived from the editing function; and*
(E)   displaying the editing function as an editing option referencing a mathematical equation.

39.   A method of interactively displaying tabular data comprising the steps of:
displaying a first graphical image representative of tabular data;
accepting from a user a selected range of values for editing of the first graphical image, wherein the range of values are included within the first graphical image;
accepting from the user first and second editing functions to edit the first graphical image in the selected range;

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    altering the first graphical image within the selected range according to the first editing function to produce a second graphical image and according to the second editing function to produce a third graphical image; and

    simultaneously displaying the second and third graphical images to the user.

    44.   A method of interactively displaying tabular data comprising the steps of:

    displaying a first graphical image representative of tabular data, *the first graphical image comprising a plurality of affordances;*

    accepting alterations to the second graphical image derived from user manipulation of the affordances;

    accepting a user selected range of values for editing of the first graphical image, wherein the range of values are included within the first graphical image;

    accepting a user selected editing function from among a plurality of possible editing functions;

    altering the first graphical image to produce a second graphical image, wherein the second graphical image comprises at least an unaltered portion of the first graphical image and an altered portion of the first graphical image derived from the selected editing function;

    altering the first graphical image to produce a third graphical image, wherein the third graphical image comprises at least an unaltered portion of the first graphical image and an altered portion of the first graphical image derived from a second editing function and wherein the selected editing function and the second editing function are applied to the first graphical image over an overlapping range of values; and .

    simultaneously displaying the second and third graphical images to the user to permit the user to select between the second and third graphical images.

<u>Chandhoke et al.</u>

Chandhoke et al. is directed to a system and method for developing a sequence of motion control operations. Various embodiments of a motion control prototyping environment application are described. The motion control prototyping environment may be designed to enable a user to easily and efficiently develop/prototype a motion control sequence without requiring the user to perform programming, or without needing to write or construct code in any

programming language. For example, the environment may provide a graphical user interface or GUI enabling the user to develop/prototype the motion control sequence at a high level, by selecting from and configuring a sequence of motion control operations using the GUI.

Prototyping can provide a library of operations that are specific to a problem domain and may enable the user to select and execute the various operations from the library. For example, the sets of operations can include a reference operation, a straight-line move operation, an arc move operation, a contoured move operation, and a gearing operation.

The architecture of Chandhoke et al. is interactive with the user. Various interfaces can be provided to the user, such as a plurality of buttons or icons corresponding to requested operations, menu commands, key commands, and voice commands, to permit the user to construct a motion sequence (¶¶ 0117, 0118, 0126, and 0127).

Although the user can modify a motion control sequence after a graphical program has been generated, the modifications are limited to setting values for default parameters, such as radius, start angle, and travel angle (¶¶0112, 0120, and 0121). These changes are effected using numeric GUI controls, check boxes, and the like. The user can also specify the breakpoints in the motion control sequence, such as by specifying coordinates at which to perform the breakpoint or by specifying the breakpoint graphically (¶0162).

Notwithstanding the foregoing, Chandhoke et al. does not teach editing only part of an existing graphical image using one of a number of possible editing functions let alone specifying a discrete range of values over which the image is to be edited and outside of which the image is not to be edited by the selected editing function.

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The Examiner asserts that Chandehoke et al. does not teach editing. The Examiner contends that:

> "Chandehoke et al. disclose in paragraph 0123 that the user may select any operation in the sequence to view or **edit** its configuration. As the user changes the sequence, the graphical views illustrating the motion and other characteristics may be updated accordingly."

Applicant disagrees. In ¶0123, Chandehoke states as follows:

> As indicated by the flowchart [Fig. 5] arrow from step 429 to step 421, the process described above may be repeated for new operations the user adds to the sequence. *New operations may be added any place within the sequence, e.g., at the beginning, end, or between two other operations. The user may select any operation in the sequence to view or edit its configuration.* As the user changes the sequence, the graphical views illustrating the motion and other characteristics may be updated accordingly.

(Emphasis supplied.) The above paragraph and Fig. 5 clearly states that the user may add new sequences - which is different from the claimed technique of editing a portion of an existing part of the graphical image. Because this is the only location in Chandehoke et al. where "editing" is mentioned, it is not obvious to one of ordinary skill in the art as to what "edit" means. It is far from obvious that "editing" means the claimed editing of only part of a previously inputted graphical image using one of a number of possible different editing functions let alone specifying a discrete range of values over which the image is to be edited using a newly selected editing function and outside of which the image is not to be edited by the selected editing function. It is equally plausible that "editing" as used in Chandhoke et al. refers only to altering one or more selected parameters of a previously selected mathematical algorithm.

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Regarding the claimed simultaneous display of two or more alternative edited variations

(using differing editing functions) of a displayed graphical image, the Examiner cites ¶0119 of

Chandehoke et al. Paragraph 0056 states in relevant part:

> A prototyping environment may integrate various capabilities in order to aid
> developers of problem solutions, depending on the particular problem domain.
> For example, a prototyping environment may provide a library of operations that
> are specific to a problem domain (such as the library of motion control operations
> discussed above) and may enable the user to select and execute various operations
> from the library. The prototyping environment may include a graphical user
> interface that is streamlined for interactively experimenting with various
> parameters associated with the selected operations and seeing the effects of the
> adjusted parameters. A prototyping environment may also include capabilities for
> simulating real-world objects or processes. A prototyping environment may be
> used to generate a sequence, solution, or script, also called a prototype, which
> represents an algorithm or process designed by the user in the prototyping
> environment.

Contrary to the Examiner's assertion, this paragraph does not teach or suggest the claimed

simultaneous display of two or more alternative edited variations (using differing editing

functions) of a displayed graphical image.

Sacerdoti

Sacerdoti fails to overcome the deficiencies of Chandhoke et al. Sacerdoti is directed to a

three-dimensional graphics generation and display application that includes an authoring mode

screen, which lists database elements that are to be graphically displayed along with a list of

variables pertaining to the database elements. The application also presents a menu of graphics

attributes. The user determines whether the graphics objects are balls for a scatter plot, bars for a

bar chart, pie-shaped elements for a pit chart, or other 3D representation. By clicking on a

database variable in the list of variables and dragging it over an attribute on the attribute menu,

the user can correlate the database variable with the graphics attribute. When the user correlates a variable to a graphics attribute, the correlation is noted by a legend that is displayed with the menu of attributes. The graphics are displayed in an animated 3D presentation with graphics attributes, including their motion over time, determined by the database variables which have been correlated to the attributes. In an alternative embodiment, the user can select variables to be presented, and a programmatic rule interpreter receives the variables and accesses a list of conditional rules to automatically correlate the variables to graphics attributes for presentation.

Accordingly, the claims are allowable.

The dependent claims provide further bases for allowance. By way of example, dependent Claims 7 and 21 are directed to the alteration of the first graphical image to produce a third graphical image, wherein the third graphical image comprises at least an unaltered portion of the first graphical image and an altered portion of the first graphical image derived from a second editing function and wherein the first and second editing functions are applied to the first graphical image over an overlapping range of values and simultaneously display the second and third graphical images to the user to permit the user to select between the second and third graphical images. Although Chandhoke et al. does allow a user to preview the "geometry" of the motion, e.g., velocity profile, acceleration profile, position plots, etc., in advance before commanding the motor to perform the sequence of moves (¶¶ 0043 and 0149), there is no capability to simultaneously display two alternative motion sequences to permit the user to select which of the two to use.

Dependent Claims 37 and 43 and independent Claim 44 are directed to the graphical manipulation of affordances on a graphical image to alter parameters associated with the graphical image. Although Chandhoke et al. discloses the alteration of default properties, parameters, and attributes on a motion sequence, the alteration is effected by numeric GUI controls or check boxes. (¶¶0120,0121, 0130, 0131, and 0133).
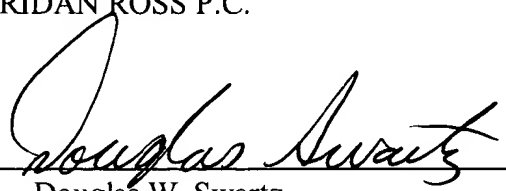
Applicant has added new Claims 47-49 which provide additional bases for allowance as discussed previously.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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